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CENTRAL FAX CENTER****SEP 05 2006****REMARKS**

Claims 1, 3, 4 and 11 are amended, Claims 10 and 13 are cancelled and Claim 16 is added. Claims 1, 3-9, 11, 12 and 14-16, as amended, remain in the application. No new matter is added by the amendments to the claims.

**The Rejections:**

In the Office Action dated June 5, 2006, the Examiner rejected Claims 1, 3-8, 11 and 12 under 35 U.S.C. 103(a) as being unpatentable over Ondrus et al. (5,831,151) in view of Theissen et al. (4,816,758).

As to Claims 1, 3 and 4, the Examiner stated that Ondrus discloses ferromagnetic tagging material suspended in a constituent mixing system having a first sensor (B sensor) for generating a first sense signal representing an amount of ferrous taggant particles per unit volume of a first component flowing adjacent the first sensor (B); a second sensor (AB sensor) for generating a second sense signal representing an amount of ferrous taggant particles per unit volume of a mixture of the first component and a ferrous taggant particle free second component flowing adjacent the second sensor (AB sensor); and a control (40) means responsive to the first and second sense signals for calculating a ratio of the volumes of the first and second components in the mixture (col. 3, line 35 - col. 4, line 39) and wherein at least first (B) and second (AB) sensors has a generally tubular body with a central passage through which material flows, but Ondrus fails to disclose that an inner sense coil extending about a circumference of the passage, a drive coil extending about a circumference of the inner sense coil and an outer sense coil extending about a circumference of the drive coil. The Examiner stated that Theissen discloses a method and apparatus for the direction of slag co-flowing within a stream of molten metal wherein an inner drive coil (3) extending about a circumference of the passage, a sense coil (4) extending about a circumference of the inner drive coil and an outer drive coil (3a) extending about a circumference of the sense coil. It would be within the level of one skilled in the art to position a sense coil between two drive coils or a drive coil between two sense coils. According to the Examiner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ondrus with the teachings of Theissen such that positioning an inner coil extending about a circumference of the passage, a drive coil extending

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about a circumference of the inner sense coil and an outer sense coil extending about a circumference of the drive coil to obtain a precise signal.

As to Claim 11, the Examiner stated that Ondrus discloses ferromagnetic tagging material suspended in a constituent mixing system including the steps of a) providing a first sensor (B sensor) for generating a first sense signal representing an amount of ferrous taggant particles per unit volume of a first component flowing into a mixing device; b) providing a second sensor (AB sensor) generating a second sense signal representing an amount of ferrous taggant particles per unit volume of a mixture of the first component and a ferrous taggant particle free second component flowing in the mixing device; and c) providing control means (40) for calculating a ratio of the volumes of the first and second components in the mixture (col. 3, line 35 - col. 4, line 39) and wherein at least first (B) and second (AB) sensors has a generally tubular body with a central passage through which material flows, but Ondrus fails to disclose that an inner sense coil extending about a circumference of the passage, a drive coil extending about a circumference of the inner sense coil and an outer sense coil extending about a circumference of the drive coil. The Examiner stated that Theissen discloses a method and apparatus for the direction of slag co-flowing within a stream of molten metal wherein an inner drive coil (3) extending about a circumference of the passage, a sense coil (4) extending about a circumference of the inner drive coil and an outer drive coil (3a) extending about a circumference of the sense coil. It would be within the level of one skilled in the art to position a sense coil between two drive coils or a drive coil between two sense coils. According to the Examiner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ondrus with the teachings of Theissen such that positioning an inner coil extending about a circumference of the passage, a drive coil extending about a circumference of the inner sense coil and an outer sense coil extending about a circumference of the drive coil to obtain a precise signal.

As to Claims 5, 6 and 12, the Examiner stated that Ondrus discloses comparing a value of the first sense signal with a value of the second sense generated after a predetermined delay representing a time required for a portion of the first component to travel from the first sensor to the second sensor (col. 5, lines 1 - 37 and fig. 4).

As to Claim 7, the Examiner stated that Ondrus discloses control means connected to an information processing device and generating an output signal representing the ration of the volumes to the information processing device (50, fig. 1).

As to Claim 8, the Examiner stated that Ondrus discloses an A/D converter (420) for converting the first (B) and second (AB) sense signals (fig. 2).

**The Response:**

The Examiner objected to Claims 3 and 4 because they depend from claim 2, which is a canceled claim. Applicant amended Claims 3 and 4 to depend from Claim 1.

Applicant appreciates the allowance of Claim 15.

The Examiner objected to Claims 9, 10, 13 and 14 as being dependent upon a rejected base claim, but stated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant amended Claim 1 to include the subject matter of cancelled Claim 10. Applicant amended Claim 11 to include the subject matter of cancelled Claim 13. New Claim 16 corresponds to Claim 14 in the form indicated by the Examiner as being allowable.

In view of the amendments to the claims and the above arguments, Applicant believes that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.